

SWAP NEWS

Watershed Planning and Source Water Protection

Watershed management and source water protection go hand in hand. You can't really have one without considering the other because drinking water sources are within watersheds and, conversely, watersheds supply drinking water.

There has been a move in recent years by state and federal resource agencies toward using watersheds as the basic organizational unit around which certain management activities are developed. In the most basic form the approach simply uses watersheds to define geographical areas that share common physical, cultural, and social characteristics. These common characteristics enable decision-makers and the public to quickly understand resource protection issues within the context of their lives and surroundings. Watersheds are a logical approach for organization that can lead to significant cost savings in resource protection program implementation through shared research, data, and management planning by resource managers.

In Montana implementation of the source water assessment program will be based on a watershed approach requiring these key steps:

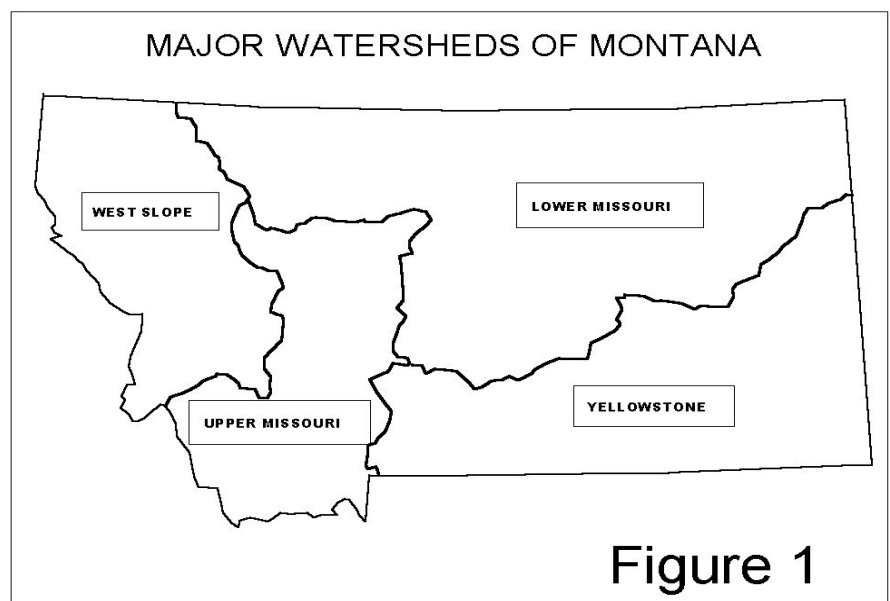
- 1) identify SWAP implementation priorities within each major watershed (Figure 1)
- 2) assign oversight responsibilities to program staff for source water assessments within each of the major watersheds
- 3) track program implementation within each watershed and provide bimonthly progress updates to ensure that deadlines are being met, and
- 4) share program implementation information with each of the four Watershed Management Section coordinators.

Step one is underway and near completion. Step two will occur by January 1 and the remaining steps are a part of program implementation.

Utilizing a watershed approach:

- ❑ will allow easier management of SWAP implementation by dividing the state into manageable units.
- ❑ will allow and foster easier coordination with other programs at DEQ.
- ❑ will encourage coordination of PWS management plans within watershed sub-areas.
- ❑ will allow DEQ to track implementation through bi-monthly status reports from each watershed coordinator.
- ❑ is consistent with the federal Clean Water Action Plan and the Montana Watershed Management Plan.
- ❑ will help meet the federal requirement that the state use an integrated watershed approach for assessment, protection and remediation that is well integrated with other water or natural resource programs.
- ❑ helps the state effectively incorporate a variety of organizations and interests into its implementation of nonpoint source activities and projects as required by the federal Clean Water Act.

If you would like more information on source water assessments and watershed planning, contact Joe Meek at 1-406-444-6697.



SWAP Focus:

Clarks Fork Yellowstone River Valley Delineation and Assessment Report

Carolyn DeMartino, DEQ Water Quality Specialist, is preparing source water delineation and assessment reports for the public water systems in the Clarks Fork Yellowstone River Valley.

The Clarks Fork Yellowstone River Valley is an agricultural valley located in Carbon County. The valley is bounded by the Beartooth Mountains approximately 40 miles to the west and the Pryor Mountains approximately 20 miles to the East. Crops grown in the valley include sugar beets, small grains, oilseeds,

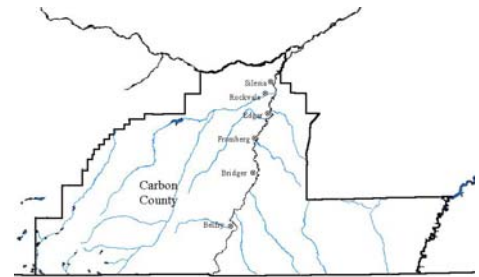
dry beans, and hay. The Clarks Fork Yellowstone River flows through the valley and is the source of irrigation water that is diverted into a network of irrigation ditches.

Three community water systems serve year-round residents in the Clarks Fork Yellowstone Valley. Six non-community public water systems serve transient patrons at restaurants, bars, churches, etc. Groundwater in approximately 30 feet of alluvium is the main source of domestic and stock water in the valley. However, some wells pump water from the Fort Union Formation below the alluvium.

DEQ is delineating management areas around public water supply wells and conducting an inventory of potential contaminant sources.

The management areas in the Clarks Fork Yellowstone River Valley is the focus of the inventory. The main potential sources of contamination are sewage disposal, agricultural chemical usage, and underground fuel storage tanks.

Please contact Carolyn DeMartino at 444-0820 regarding questions on the Clarks Fork Yellowstone River Valley Delineation and Assessment Report.



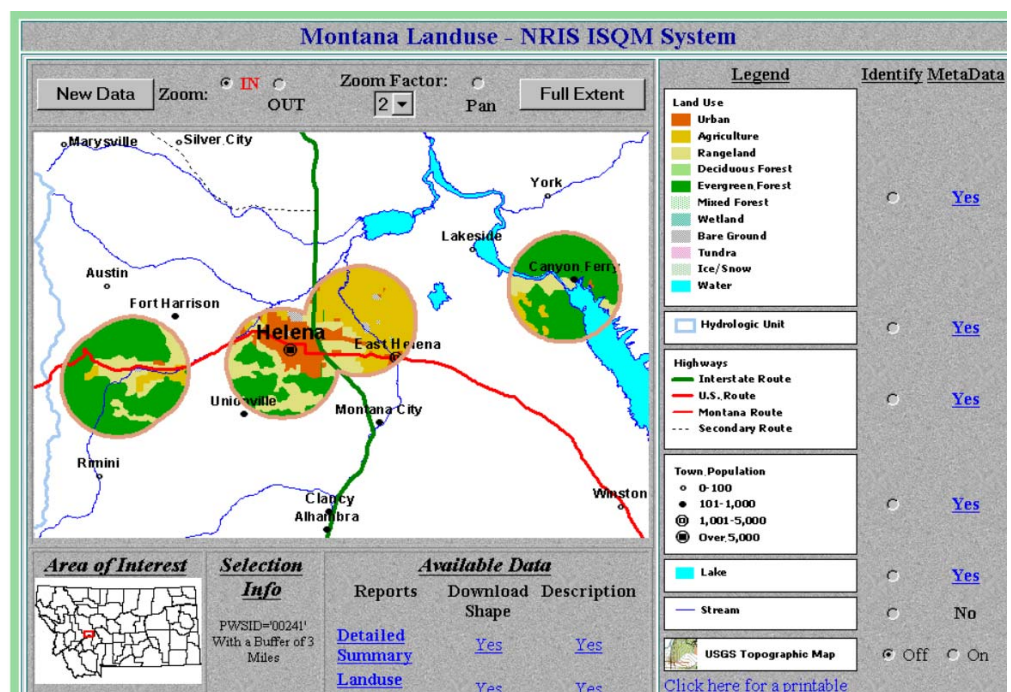
SWAP Activities:

Fall Water School Training

SWAP staff traveled to Bozeman in September for the Fall Water School sponsored by the Montana Water Center. The trip provided an opportunity to train water system operators on source water assessment and provided a forum to showcase an Internet-based tool developed jointly between DEQ and the Natural Resource Information System (NRIS) at the Montana State Library.

This tool, called the Source Water Protection Program Query System, allows anyone to design custom maps of public water supplies and surrounding areas. In addition to public water supply locations, the tool can map potential contaminant sources such as underground storage tanks, cultivated cropland, and areas of different septic system density.

The SWAP team set up a display including a laptop computer and video projector to showcase the mapper. With a connection to the



Internet, water operators were able to view a topographic map and locations of potential contaminant sources for the area around their wells. With the information the mapper provides operators can consider the steps necessary to protect their water source. DEQ and NRIS are striving to make the Source Water Mapper even easier to use and

to expand the kinds and amount of information available. Please visit the Mapper Internet site at http://nr.is.state.mt.us/wis/swap/swap_query.asp to follow our progress and to access completed Source Water Delineation and Assessment Reports.

AWRA Conference Participation

On October 4th DEQ's Source Water Protection Section staff attended the 17th Annual Montana Water Conference in West Yellowstone.

The American Water Resources Association (AWRA) and the Montana University Systems Water Center sponsored the two-day conference which proved to be an excellent opportunity to learn and share ideas about water protection with others in the water field.

Over 30 presentations were given relating to water quality, the use of constructed wetlands in waste-water treatment, surface water restoration, water management, and groundwater characterization. James Swierc and Jim Stimson of the Source Water Protection Section were among the speakers.

James explained the reliance of source water planning on a sound but simplified hydro-geologic conceptual model. Jim outlined ways to use desktop geographical information system (GIS) tools, such as the NRIS Mapper, in groundwater projects.

Dr. Stephan Custer, professor at Montana State University, lead a field trip to Yellowstone Park. It was a bit chilly at eight in the morning, but attendees still learned quite a few fascinating facts about Yellowstone's geologic past and present, the variety of scientific studies being conducted in the Park, and even the lifestyles of buffalo!



Outside Cooperation:

Local Government Groups

One of the goals of the Source Water Protection Program (SWPP) is to involve local groups with Source Water Protection activities in a community-based approach. For areas where multiple public water supply sources are located in close proximity it makes sense to assess the threats and develop management strategies that consider all public water supplies. Therefore, the long-term goal is to protect health by protecting water supplies.

The SWPP is encouraging and working with Local Water Quality Districts to help implement this community-based program. While certain districts and local governments are concerned that the program will become regulatory, others acknowledge that it is simply a method of collecting data about their district's water resources. This includes information on the location of public water supplies, the hydro-geology of the water sources, and the location of potential sources of contamination to the water source. This data collection will help each district to be a better community resource and to make informed responses regarding local water resources.

The SWPP is coordinating with the Missoula Water Quality District to hire a college intern to help start the data collection. Other districts also have expressed interest in the community-based approach to gather data about their local water systems.

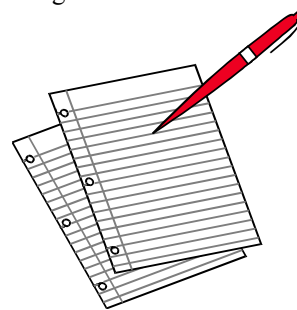
The Source Water Protection Program is also working with several community PWSs in the Flathead Valley to implement this approach for many of the PWSs in the area.

State and Federal PWSs

About 290 transient public water supplies (PWSs) in Montana are owned and operated by state and federal agencies. State facilities with public water supplies include 53 parks and fishing access sites managed by the Montana Department of Fish, Wildlife and Parks (FWP), and 41 rest areas maintained by the Department of Transportation (MDT).

Federal agencies manage a variety of recreation sites, parks, and historic sites with transient public water supplies in Montana. The agencies include the Forest Service (97 sites), Bureau of Land Management (16 sites), Bureau of Reclamation (39 sites), and the Park Service (33 sites).

All transient public water supplies are required to have source water delineation and assessment reports completed by the year 2003 as mandated in the revised Safe Drinking Water Act.



DEQ's Source Water Protection Program (SWPP) has contacted each of the agencies to help develop strategies for completing the reports within the mandated timeframe.

SWPP offers technical advice and assistance, if needed. Some agencies will complete the reports using internal technical staff and others will use contractors. The reports will be submitted for review to the Source Water Protection Program and, once approved, will be available on the DEQ web site.

SWAP Progress:

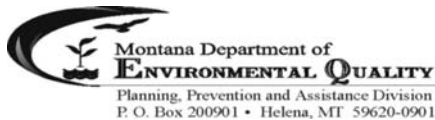
Completed Source Water Delineation and Assessment Reports for the past 6 months:

Ackley Lake (near Hobson)
Centerville Bar
Centerville School
Centerville Water Users Association
City of Choteau
Town of Darby
Town of Hamilton
City of Libby
Eastgate Village (East Helena)
Fort Rockvale Restaurant (Rockvale)
Miller Hutterite Colony
Rockport Hutterite Colony
Saddle Mountain Estates (Montana City)
Stockett Water and Sewer District
Town of Neihart
Pablo Water & Sewer District
Town of Saint Ignatius
Town of Stevensville
Tracy Water Users Corporation
Westminster Spires Church Camp (Carbon County)
Town of Zortman

Source Water Delineation and Assessment Reports in Progress:

City of Three Forks (8 systems)
Edgar Elementary School
Holmberg Village (East Helena)
Homestead Acres (near Great Falls)
Hutterite Colonies (20 systems)
Livingston (17 systems)
MDT Rest Areas (8 systems)
Town of Belfry (2 systems)
Town of Cascade
Town of Charlo
Town of East Helena
Town of Harlem
Town of Malta
Town of Reedpoint (4 systems)
Town of Ronan
Town of Sheridan
White Haven (7 systems south of Libby)

Reports can be accessed through the Source Water Protection Query System web site @
<http://nris.state.mt.us/wis/swap/swapquery.asp>



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